

1053,263



PATENT SPECIFICATION

DRAWINGS ATTACHED

1053,263

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COMPLETE SPECIFICATION

Means for Attaching Castors and the like

I, SILVIO VINCENT ANTHONY, an Australian Citizen of 172 Perry Street, Fairfield, in the State of Victoria, Commonwealth of Australia, do hereby declare the invention for which I pray that a Patent may be granted to me and the method by which it is to be performed to be particularly described in and by the following statement:—

This invention relates to means for attaching casters and the like and is concerned more particularly with means for attaching casters to splayed legs of furniture and the like.

A popular form of leg for articles of furniture comprises a tubular member, usually tapered, having at its upper end a screw-threaded projection whereby the leg is screwed into the piece of furniture. In many applications the plate, bracket or like member is shaped or attached so that the leg is splayed at an angle to the vertical, usually $12\frac{1}{2}^\circ$. When attaching casters or the like to a splayed leg it is essential, for proper operation, that the caster or the like should be properly oriented, i.e. the swivelling axis of the caster should be truly vertical when the article of furniture is on a horizontal surface. Various means have been evolved to facilitate the attachment of casters and the like to the lower ends of splayed legs but none of these has been entirely satisfactory in that they have involved difficulties in manufacture, assembly and/or adjustment.

It is an object of this invention to provide simple and reliable means whereby a caster or the like may be readily mounted on a splayed leg and with this object in view the invention broadly resides in a device adapted to be engaged with the end of a leg with a splined connection and being adapted to engage a caster or the like in swivelling engagement about an axis inclined to the axis of the splined connection by an angle equal to the angle of splay of the leg.

In the following description of a preferred

form of the invention, reference is made to the accompanying drawings wherein:—

Figure 1 is a perspective view of the lower portion of a cabinet having splayed legs provided with casters mounted on devices according to the invention,

Figure 2 is a view in elevation, and partly in section, showing one of the splayed legs and a caster connected by a device according to the invention,

Figure 3 is a view in elevation of the device looking in the direction of the arrow 3 of Figure 2, and

Figure 4 is a view in cross-section on the line 4—4 of Figure 2.

The drawings illustrate a device 1 comprising a metal pin which has a bend intermediate of its ends so that the portion above the bend is inclined to the portion below the bend at an angle equal to the angle of splay of the leg with which the pin is used, i.e. normally $12\frac{1}{2}^\circ$. An upper portion of the pin 1, including a small portion of the part of the pin below the bend is encased in a sleeve 2 made of plastic such as nylon or the material marketed under the trade mark "DELRIN". The sleeve is moulded so as to form a tubular portion which is co-axial with the upper portion of the pin and its external periphery is formed as a plurality of closely spaced splines 3. The part of the sleeve 2 which surrounds the bend of the pin 1 is formed as a flange 4. The upper surface of the flange 4 is formed with a shoulder 5 at right angles to the splines 3, and to the axis of the upper portion of the pin 1. The lower surface of the flange 4 is formed as a shoulder 6 which is at right angles to the axis of the lower portion of the pin 1.

In order to ensure that the plastic sleeve 2 is firmly attached to the pin 1 and cannot rotate upon it, part of the pin is provided with indentations 7 wherein the plastic enters and becomes keyed.

Near the lower end of the pin 1 there is

provided an annular groove 8 for seating a spring ring 9 to engage and hold in an annular recess 10 in the swivelling socket 11 of a caster 12 fitted over the lower section of the pin.

5 The device described is used in conjunction with a tubular leg 13 of which the bore at the tip is provided with splines 14. The splines 14 are shaped to engage with the splines 3 and like them are evenly spaced so that the
10 device can be engaged with the leg in as many different positions as there are splines.

In use, the legs 13 are attached to the base of the cabinet 15 in the usual way, i.e. by screwing the upper ends of the legs into brackets fastened to the underside of the cabinet,
15 until the legs are tightly engaged. The devices according to the invention are then engaged with the legs by inserting the splined portions, care being taken to orient the devices so that
20 the projecting portion of each pin is directed towards the direction away from which the leg is inclined. To facilitate proper orientation a distinctive mark comprising a triangular flat
25 16 is formed on the flange 4 at the inner side of the bend and this marking can be readily lined up with the appropriate part of the bracket or other member to which the leg is attached.

The precise number of splines may be varied, but it is found that the provision of
30 twenty-two splines on the plastic sleeve provides sufficient fineness of adjustment in order to ensure that the caster swivelling axis is close enough to the true vertical position to enable
35 the caster to function properly.

WHAT I CLAIM IS:—

1. A device for mounting a caster or the like on a splayed leg comprising a pin adapted
40 to be engaged with the end of a leg with a splined connection and being adapted to en-

gage a caster or the like in swivelling engagement about an axis inclined to the axis of the splined connection by an angle equal to the angle of splay of the leg.

2. A device for mounting a caster or the like on a splayed leg comprising a pin having
45 a bend intermediate of its ends whereby the portion at one side of the bend is inclined to the portion at the other side of the bend at
50 an angle equivalent to the angle of splay of the leg, the portion of the pin at one side of the bend having a splined exterior adapted to be engaged within a splined bore of the leg
55 and the opposite portion of the pin being adapted to be engaged with a caster or the like.

3. A device according to claim 2 wherein the splines are formed on a sleeve enclosing
60 the upper portion of the pin.

4. A device according to claim 3 wherein
65 the sleeve is plastic and is keyed to the pin.

5. A device according to claim 4 having a flange on the lower end of the sleeve and
70 a marking on the flange to facilitate lining up the pin with the leg.

6. A device according to any preceding claim wherein the lower portion thereof has an annular recess housing a spring ring for engagement
75 within an annular groove in a socket in the caster or the like.

7. A device for mounting a caster or the like on a splayed leg substantially as herein-
80 before described with reference to the accompanying drawings.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

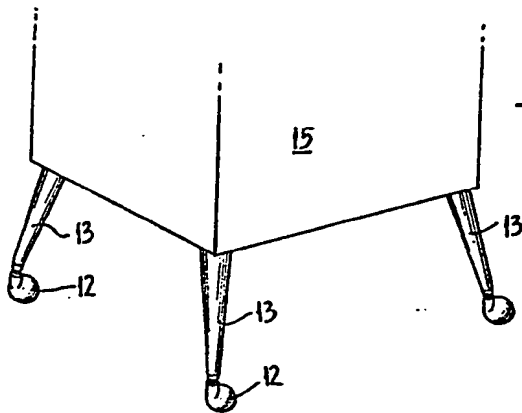


FIG. 1

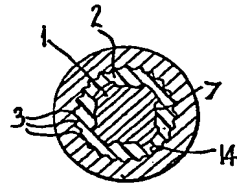


FIG. 4.

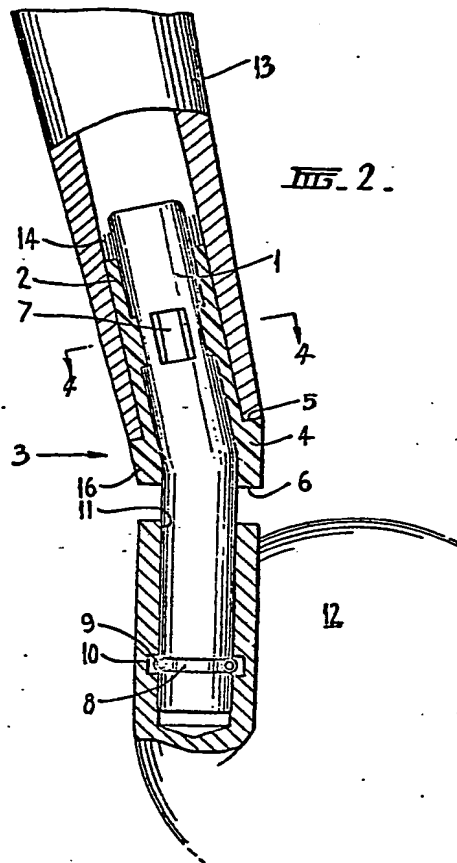


FIG. 2.

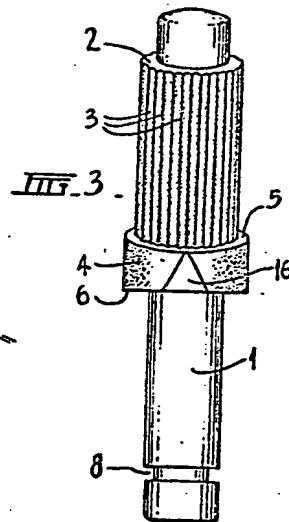


FIG. 3.

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